

Serial No.: Unknown (US National Stage of PCT/IB03/02170)

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Atty. Ref.: 10025.0159.PCUS00

## **AMENDMENTS TO THE CLAIMS:**

Please amend the claims to read as follows:

1. (Previously presented) A method of densifying a bulk particulate material to provide a

densified flowable bulk particulate material, the method including

mechanically agitating the bulk particulate material in the presence of an aqueous liquid

densification agent; and

allowing the concentration of the aqueous liquid densification agent to reduce during the

mechanical agitation of the bulk particulate material by allowing the bulk particulate material to

heat up as a result of the mechanical agitation and vaporizing at least a portion of the aqueous

liquid densification agent, thereby to provide a flowable bulk particulate material of increased

bulk density.

2. (Previously presented) The method as claimed in claim 1, in which the bulk particulate

material, prior to densifying thereof, includes water as the densification agent in a mass

concentration falling in a range with a lower limit of 0.4 % and an upper limit of 20 %.

3. (Previously presented) The method as claimed in claim 2, in which the water is present

in a range with a lower limit of 0.45 % and an upper limit of 15 %.

4. (Currently amended) The method as claimed in any one of the preceding claims claim

1, in which the bulk particulate material is microsilica.

5. (Currently amended) The method as claimed in any one of claims 1 to 3 inclusive

claim 1, in which the bulk particulate material is selected from the group consisting of carbon

black, fly ash, kaolin, and meta kaolin.



Serial No.: Unknown (US National Stage of PCT/IB03/02170) Applicant: Kevan Vaughan Russel-Smith

Atty. Ref.: 10025.0159.PCUS00

6. (Currently amended) The method as claimed in any one of claims 1 to 3 inclusive

claim 1, in which the bulk particulate material is selected from the group consisting of Mn<sub>2</sub>O<sub>3</sub>,

Mn<sub>3</sub>O<sub>4</sub>, V<sub>2</sub>O<sub>5</sub> and slag.

7. (Previously presented) The method as claimed in claim 4, in which the microsilica has

a particle size of less than 0.5 um.

8. (Currently amended) The method as claimed in any one of the preceding claims claim

1, which includes adding the densification agent to the bulk particulate material, prior to or

during mechanical agitation of the bulk particulate material.

9. (Currently amended) The method as claimed in any one of the preceding claims claim

1, in which mechanically agitating the bulk particulate material in the presence of the

densification agent includes at least partially confining the bulk particulate material and rotating

a rotatable member submerged under the bulk particulate material about an axis of rotation to

cause severe agitation of the material.

10. (Currently amended) The method as claimed in any one of the preceding claims claim

1, in which mechanically agitating the bulk particulate material in the presence of the

densification agent includes severely agitating the bulk particulate material with a rotatable

member submerged in the bulk particulate material in a vessel and rotating about an axis of

rotation which is upwardly extending, and inhibiting displacement of material downwardly past

the rotating member during rotation of the rotatable member whilst allowing free movement of

materials in the vessel above the rotating member.

11. (Currently amended) The method as claimed in claim 9 or claim-10, in which the bulk

particulate material is confined in a vessel having a closed bottom, the rotatable member being

located immediately above the bottom of the vessel.



Serial No.: Unknown (US National Stage of PCT/IB03/02170)

Applicant: Kevan Vaughan Russel-Smith Atty. Ref.: 10025.0159.PCUS00

12. (Currently amended) The method as claimed in any one of the preceding claims claim

1, in which a ratio of the bulk density of the particulate material prior to densifying thereof, to the

bulk density of the flowable densified particulate material is at least 2: 3.

13. (Previously presented) The method as claimed in claim 12, in which the ratio of the

bulk density of the particulate material prior to densifying thereof, to the bulk density of the

flowable densified particulate material is at least 1: 5.

14. (Currently amended) The method as claimed in any one of the preceding claims claim

1, in which the bulk particulate material includes water in, or water is being added to the bulk

particulate material to, a concentration of more than 4 % by mass, with the densified bulk

particulate material including less than 3 % water by mass.

15. (Previously presented) The method as claimed in claim 14, in which the bulk

particulate material includes water in, or water is being added to the bulk particulate material to,

a concentration of between 4 % and 8 % by mass, with the densified bulk particulate material

including less than 1.5 % water by mass.

16. (Previously presented) Bulk particulate material densification apparatus for densifying

a bulk particulate material to provide a densified flowable bulk particulate material, the apparatus

including

a vessel for at least partially confining a body of the bulk particulate material;

a rotatable member which is arranged such that in use it is submerged in the body of bulk

particulate material mechanically severely to agitate the bulk particulate material;

a densification agent inlet leading into the vessel;

a densification agent outlet leading from the vessel to remove vaporized densification

agent; and



Serial No.: Unknown (US National Stage of PCT/IB03/02170)

Applicant: Kevan Vaughan Russel-Smith

Atty. Ref.: 10025.0159.PCUS00

drive means connected to the rotatable member and capable of rotating the rotatable member about said axis of rotation when the rotatable member is submerged in the body of bulk particulate material.

17. (Previously presented) Bulk particulate material densification apparatus for densifying a bulk particulate material to provide a densified flowable bulk particulate material, the apparatus

including

a vessel for at least partially confining a body of the bulk particulate material;

a rotatable member which is arranged such that in use it is submerged in the body of bulk

particulate material mechanically severely to agitate the bulk particulate material;

a densification agent outlet from the vessel to remove a vaporized densification agent

from the vessel; and

drive means connected to the rotatable member and capable of rotating the rotatable

member about said axis of rotation when the rotatable member is submerged in the body of bulk

particulate material.

18. (Currently amended) Bulk particulate material densification apparatus as claimed in

claim 16 or claim 17, in which the rotatable member defines at least one material contacting

surface facing substantially tangentially in the direction of rotation thereby to cause movement of

material particles essentially towards or away from the axis of rotation at least on initial contact

of the material particles with the material contacting surface.

19. (New) Bulk particulate material densification apparatus as claimed in claim 16 or

claim 17, in which the rotatable member defines at least one material contacting surface facing

substantially tangentially in the direction of rotation thereby to cause movement of material

particles essentially towards or away from the axis of rotation at least on initial contact of the

material particles with the material contacting surface.



Serial No.: Unknown (US National Stage of PCT/IB03/02170) Applicant: Kevan Vaughan Russel-Smith

Atty. Ref.: 10025.0159.PCUS00

20. (New) The method as claimed in claim 10, in which the bulk particulate material is confined in a vessel having a closed bottom, the rotatable member being located immediately above the bottom of the vessel.

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